```
 1           UNITED STATES DISTRICT COURT

 2          NORTHERN DISTRICT OF CALIFORNIA

 3             SAN FRANCISCO DIVISION

 4

 5    ------------------------

 6   ORACLE AMERICA, INC.,      )

 7        Plaintiff,            )

 8   vs.                        ) No. CV 10-03561 WHA

 9   GOOGLE, INC.,              ) VOLUME I

10        Defendant.            )

11    ------------------------

12

13     HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

14

15        Videotaped Deposition of NOEL POORE,

16        taken at 42 Chauncy Street, Boston,

17        Massachusetts, commencing at 2:05 p.m.,

18        Wednesday, September 7, 2011, before

19        Jill Shepherd, RPR, MA-CSR No. 148608,

20        NH-CSR No. 128, CA-CSR No. 13275, CLR,

21        and Notary Public.

22

23

24

25   PAGES 1 - 95
```

Highly Confidential - Attorneys' Eyes Only

1 Q. When did you begin working on the underlying
2   data in benchmarking for this report?
3   MS. AGRAWAL: Objection. Form.
4 A. Earlier this year after I received the
5   request to assist the legal team.
6 Q. Do you recall when you started working on
7   this?
8   MS. AGRAWAL: Same objection.
9 A. Well, I said earlier that, to the best of my
10   recollection, I received the request in the
11   March or maybe April time frame, so that
12   would have been when I began the technical
13   work that ended up with this report.
14 Q. Did you draft the report?
15   MS. AGRAWAL: Objection. Form.
16 A. Yes, I did.
17 Q. Did you have any help?
18   MS. AGRAWAL: Objection. Form.
19 A. Yes. The exact format of the report -- you
20   know, I did receive some --
21   MS. AGRAWAL: Sorry. I caution the
22   witness not to reveal any attorney-client
23   privileged communications.
24   To the extent that you can answer the
25   question without doing so, you can.

Page 22

1   THE WITNESS: Okay.
2 A. So I did receive some help with the exact
3   format of the report and some of the --
4 Q. How long did it take you to draft the
5   report?
6   MS. AGRAWAL: Objection. Form.
7 A. It was written over a period of several
8   weeks, as far as I recall. It wasn't
9   something that I was working on, you know,
10   100 percent of the time.
11 Q. Did you speak with Professor Mitchell
12   regarding your report?
13   MS. AGRAWAL: Objection. Form.
14 A. Yes. I have been involved with a number of
15   phone conversations with Professor Mitchell.
16 Q. Did you speak with Peter Kessler regarding
17   the report?
18   MS. AGRAWAL: Objection. Form.
19 A. Yes. Mr. Kessler was involved in some of
20   those conversations too, yes.
21 Q. Did you speak with Mr. Vandette?
22   MS. AGRAWAL: Objection. Form.
23 A. I don't recall specifically whether
24   Mr. Vandette was involved in any of those
25   conversations. I have not directly

Page 23

1   discussed my report with Mr. Vandette.
2 Q. Did you discuss your report with Erez
3   Landau?
4   MS. AGRAWAL: Objection. Form.
5 A. No.
6 Q. Did you discuss your report with Seeon
7   Birger?
8   MS. AGRAWAL: Objection. Form.
9 A. No.
10 Q. Anyone else you discussed your report with
11   other than Professor Mitchell and
12   Mr. Kessler?
13   MS. AGRAWAL: Objection. Form.
14 A. I don't recall discussing it with anyone
15   else, no.
16 Q. Did you discuss it with some attorneys; is
17   that correct?
18   MS. AGRAWAL: And I caution -- I
19   instruct the witness -- caution the witness
20   not to reveal attorney-client privileged
21   communications; but to the extent you can
22   answer the question with a yes or no, you
23   can answer.
24 A. Yes, I have. I have discussed the report
25   with attorneys, yes.

Page 24

1 Q. Did you discuss the report with any other
2   Oracle engineers?
3 A. No.
4 Q. Did any Oracle engineers assist you in your
5   performance benchmarking or any of the work
6   that you did to prepare this report?
7   MS. AGRAWAL: Objection. Form.
8 A. No.
9 Q. So you did all the work in this report by
10   yourself, correct?
11 A. That's correct.
12 Q. Do you have any opinions regarding this case
13   that are not included in your report?
14   MS. AGRAWAL: Objection. Form.
15 A. Well, this report is on a very -- you know,
16   specifically relating to two of the seven
17   patents that are in question. You know, I
18   have been specifically asked to write the
19   report on those and not to form or express
20   any opinions on anything else about this
21   case.
22 Q. So you have no opinions regarding any of the
23   other asserted patents or issues in this
24   case; is that correct?
25   MS. AGRAWAL: Objection. Form.

Page 25

7 (Pages 22 - 25)

1 A. Well, not -- you know, I'm not a patent
2   attorney, but it does seem likely to me from
3   an engineering opinion that some of the
4   other patents at least are indeed infringed.
5 Q. You've reviewed the patents?
6   MS. AGRAWAL: Objection. Form.
7 A. I have not reviewed the patents. I haven't
8   sat down and read the patent documents. I
9   know --
10 Q. Does your report include all of your
11   opinions with respect to the two patents
12   that you were asked to address?
13 A. Yes.
14   MS. AGRAWAL: Objection. Form.
15 Q. Is Oracle paying you anything in addition to
16   your regular compensation for your work in
17   this case?
18   MS. AGRAWAL: Objection. Form.
19 A. No.
20 Q. Approximately how many hours have you worked
21   on this case?
22   MS. AGRAWAL: Objection. Form.
23 A. So this is not something that I have been
24   counting.
25 Q. Yeah. But, generally, do you have any idea

Page 26

1 A. No.
2 Q. Do you have any financial interest in the
3   outcome of this case?
4   MS. AGRAWAL: Objection. Form.
5 A. No.
6 Q. What is your annual compensation at Oracle?
7   MS. AGRAWAL: Objection. Form.
8 A. Approximately $192,000.
9 Q. Do you get a bonus in addition to that
10   salary?
11   MS. AGRAWAL: Objection. Form.
12 A. Yes. There is a bonus at the discretion of
13   my manager.
14 Q. Do you have Oracle stock or options?
15 A. I do have some options that were issued when
16   Sun purchased Savaje.
17 Q. How many?
18 A. I believe that there are a few, you know, a
19   few hundred options outstanding.
20 Q. You have no Oracle stock currently?
21 A. I do not own any Oracle stock currently,
22   that's correct.
23 Q. And you have a few hundred options?
24 A. I believe that's the right number, yes.
25 Q. Have you been informed that you would

Page 28

1   of how many days it would have added up to?
2   MS. AGRAWAL: Objection. Form.
3 A. I think the total must -- the total amount
4   of time I have spent on this since earlier
5   in the year must be, you know, at least
6   four -- you know, four to six weeks,
7   something like that, if you were to take all
8   the time and turn it into a full-time
9   equivalent.
10 Q. Is your involvement in this case part of
11   your current job responsibilities?
12   MS. AGRAWAL: Objection. Form.
13 A. Yes.
14 Q. Your management knows that you are working
15   on this case, correct?
16   MS. AGRAWAL: Objection. Form.
17 A. Yes.
18 Q. Have you in the past performed any work for
19   Oracle or Sun in connection with any other
20   case?
21   MS. AGRAWAL: Objection. Form.
22 A. No.
23 Q. Are you currently working for Oracle in
24   connection with any other case?
25   MS. AGRAWAL: Objection. Form.

Page 27

1   receive anything in return for your work in
2   this case such as a bonus or a promotion?
3 A. No.
4 Q. Looking at your report on page 19, is that
5   your signature?
6 A. Yes.
7 Q. And did you sign this document on August 6,
8   2011?
9 A. Yes.
10 Q. Is there anything in this report that you
11   believe should be corrected or changed?
12 A. There is. In reviewing the materials, I did
13   notice one error in one of the attachments.
14   The spreadsheet, which contains the results
15   of the '702, experiment three, the column
16   headers for the number of classes and the
17   number of quickened methods are switched.
18 Q. Did that affect the results you obtained
19   from the data in that spreadsheet?
20 A. No.
21 Q. So that doesn't change the data reflected in
22   this report; is that correct?
23 A. That's correct.
24 Q. Are you currently working on any
25   supplemental report or analysis?

Page 29

8 (Pages 26 - 29)

1   MS. AGRAWAL: Objection. Form.
2   I caution the witness not to reveal
3   any attorney-client privileged
4   communications.
5 A. No. I have not been asked to produce any
6   supplemental reports or updates to this
7   report or anything.
8 Q. Are you conducting any additional analysis
9   of Dalvick Virtual Machine or Android?
10   MS. AGRAWAL: Same objection. Same
11   caution.
12 A. I'm not conducting any new technical work in
13   this area at the moment, no.
14 Q. In preparing your report, you looked at
15   Android source code; is that correct?
16 A. That's correct.
17 Q. Was that Android source code public, what
18   you received from the publicly available Web
19   site?
20 A. Yes. As I outlined, for example, in
21   paragraph 13 of my report, then the source
22   code that was used for these experiments was
23   pulled from the publicly-available Android
24   source code repository.
25 Q. Did you review any source code relating to

1   any particular Android-based device?
2   MS. AGRAWAL: Objection. Form.
3 A. No.
4 Q. Did you look at any technical documents
5   publicly available in an Android Web site?
6 A. Yes. So, for example, in Appendix C, which
7   is on page 32 of my report, then there is
8   the URL of a document, public document,
9   there on the Android Web site, which
10   specifies the format of the Dalvick
11   executable file.
12 Q. You looked at that document?
13 A. Yes.
14 Q. Did you look at any other technical
15   documents?
16 A. I can't think of any other specific
17   technical documents that I consulted, no.
18 Q. Did you look at any Web pages on the Android
19   Web site?
20 A. Well, I did consult the Web pages on how to
21   download the Android source, how to set up a
22   build environment, how to install the repo
23   tool that is used to set up the source code
24   repository and so on.
25 Q. Did you look at any Web pages besides for

1   those?
2   MS. AGRAWAL: Objection. Form.
3 A. There was one page that I looked at that
4   summarized the Dalvick instruction set
5   and -- but I don't recall exactly where that
6   page was.
7 Q. Did you watch any videos relating to Android
8   on the Internet?
9 A. Not specifically in relation to this work.
10   I mean, I had watched prior to this work
11   than I had watched, you know, videos
12   relating to Android, for example, Google IO
13   presentations.
14 Q. Prior to this work, did you look at any
15   other technical documents relating to
16   Android?
17 A. Yes. There is Java doc for the Android, you
18   know, the Android APIs on the Internet, and
19   I certainly consulted that during prior work
20   and while I was writing applications.
21 Q. Did you look at any documents that were
22   produced by Google to Oracle in this case,
23   and those documents would likely have
24   numbers on the bottom of the page?
25 A. No.

1 Q. The source code that you mentioned before
2   relating to Android, did you personally
3   download that?
4 A. Yes.
5   (Exhibit 475 marked.)
6 Q. Exhibit 475 is U.S. patent number 5,966,702.
7   I will refer to it as the "'702 patent," and
8   this is one of the patents asserted in this
9   case.
10   Have you seen this patent before?
11 A. Yes.
12 Q. Have you reviewed the patent claims?
13   MS. AGRAWAL: Objection. Form.
14 A. I have looked through the patent, but at no
15   time have I been asked to express an opinion
16   on exactly which claims are infringed or
17   anything like that.
18 Q. Do you know which claims are asserted in
19   this case?
20   MS. AGRAWAL: Objection. Form.
21 A. No.
22 Q. Was any of the work that you did and
23   described in your report particular to any
24   individual claim in the '702 patent?
25   MS. AGRAWAL: Objection. Form.

9 (Pages 30 - 33)

1 A. So the guidance that I was given in
2   conversation with Dr. Mitchell was to focus
3   my work on the shared constant table that is
4   used in the Dalvick executable file format.
5 Q. So Professor Mitchell told you what to look
6   at with respect to the accused
7   functionality; is that correct?
8 A. Yes.
9 Q. But you didn't actually review the asserted
10   claims in this case?
11   MS. AGRAWAL: Objection. Form.
12 Q. Is that correct?
13 A. That's correct, yes.
14 Q. Are you familiar with the concept of a
15   multiclass file?
16   MS. AGRAWAL: Objection. Form.
17 A. I am familiar with the concept of packing
18   multiple classes into a single file
19   structure, yes.
20 Q. Are you familiar with the concept of a
21   multiclass file as it is described in the
22   '702 patent?
23   MS. AGRAWAL: Objection. Form.
24 A. I guess as an engineer. I'm reluctant to
25   answer that question with a definite yes,

Page 34

1   single file in order to benefit from the
2   fact that they are within a single file.
3 Q. Have multiclass files been implemented in
4   Sun or Oracle products?
5   MS. AGRAWAL: Objection. Form,
6   outside the scope.
7 A. I don't actually know whether a multiclass
8   file in this sense that we've just
9   discussed, or that I just discussed, has
10   actually been implemented in any Sun or
11   Oracle product that has shipped.
12 Q. You don't know if the multiclass file
13   described in this patent has ever shipped in
14   an Oracle product?
15   MS. AGRAWAL: Objection. Form.
16 A. Well, there is a form of multiclass file
17   that is implemented in the CVM product, so
18   CVM has the ability to romize,
19   R-O-M-I-Z-E -- to romize a defined
20   collection of classes. And the -- so those
21   classes are then -- the loaded form of those
22   classes is then stored in a single file. So
23   I guess you could argue that that is a
24   multiclass file.
25 Q. Do you mean that the romizer can create a

Page 36

1   because I'm not necessarily familiar enough
2   with the detail of this patent to -- you
3   know, it seems like an ambiguous question.
4 Q. Do you understand the -- let me rephrase.
5   Do you understand that a jar file will
6   have many different class files in it?
7   MS. AGRAWAL: Objection. Form.
8 A. I understand that a jar file does contain
9   many different class files, but that the
10   structure of the jar file makes no attempt
11   to combine those different class files in
12   any way. A jar file is specifically -- I
13   mean, it is a structure that is specifically
14   designed to package multiple files of any
15   kind, not specifically class files, into a
16   single container file.
17 Q. So a multiclass file, as you understand it,
18   combines classes in some form or another?
19   MS. AGRAWAL: Objection. Form.
20 A. I would understand the term "multiclass
21   file" to mean that you are doing more than
22   simply, you know, bundling multiple
23   independent classes into a single file, but
24   that you are somehow operating on the
25   classes which are contained within the

Page 35

1   multiclass file?
2   MS. AGRAWAL: Objection. Form,
3   outside the scope.
4   Sorry, Mr. Franz. I don't want to get
5   in this fight with you again. I'm going to
6   ask you to stick to the report. The fact
7   that he's not here as a fact witness or to
8   get into topics that are not within his
9   report.
10 Q. Can you answer the question?
11   MS. AGRAWAL: Same objection.
12 A. So I'm not part of the CVM team, and,
13   therefore, I wouldn't qualify myself as an
14   expert in CVM. But my understanding is
15   that, yes, it would be reasonable to
16   understand the romized class file as a
17   multiclass file.
18 Q. Do you know of any multiclass files in JDK?
19   MS. AGRAWAL: Objection. Form,
20   outside the scope. Same caution.
21 A. No, I do not.
22 Q. Is it your understanding that multiclass
23   files have a shared constant pool?
24   MS. AGRAWAL: Objection. Form,
25   outside the scope.

Page 37

10 (Pages 34 - 37)

1 Q. Have you tried comparing the dex file to its
2   dexdump output?
3   MS. AGRAWAL: Objection. Form.
4 A. No. I don't believe I have done anything
5   that would fall under that heading, no.
6   MR. FRANCIS: Okay. Why don't we
7   take a five-minute break. And we'll try to
8   wrap it up.
9   THE VIDEOGRAPHER: The time is
10   4:17. We are now off the record.
11   (Short recess.)
12   THE VIDEOGRAPHER: The time is
13   4:28. We are now back on the record.
14   (Exhibit 476 marked.)
15 Q. I bet you figured this was coming.
16   Exhibit 476 is U.S. patent number
17   6,061,520. I will refer to it as the '520
18   patent, and this is asserted by Oracle in
19   the case.
20   Have you seen this patent before?
21 A. Yes, I have seen it.
22 Q. Have you reviewed it?
23 A. No. As with the other -- as with the
24   '702 patent, I have seen it, I have scanned
25   through it, but I haven't seen a detailed

Page 74

1   review of the -- of all of the claims and so
2   on.
3 Q. Do you know which claims are asserted in
4   this case from this patent?
5 A. I do not.
6 Q. Have you reviewed Oracle's infringement
7   contentions relating to this patent?
8 A. Yes. I was provided with the -- with that
9   document for the '520 patent, and I scanned
10   through it. So the process for this patent
11   was basically the same as for the '702. I
12   consulted with John -- I forgot his name
13   now.
14 Q. Professor Mitchell?
15 A. Professor Mitchell, thank you. So I
16   consulted with Professor Mitchell, and he
17   gave me direction. And the outcome of that
18   conversation was about how to proceed in
19   terms of testing and technical work for this
20   patent report.
21 Q. Do you believe you have a general sense of
22   what this patent is about?
23   MS. AGRAWAL: Objection. Form.
24 A. Yeah. I believe, generally speaking, this
25   patent is about replacing the -- simulating

Page 75

1   the Java byte codes that initialize an array
2   and saving the initialized array value in
3   order -- and using that instead of executing
4   the byte codes that perform the
5   initialization.
6 Q. Do you know if this technique was
7   implemented in any Oracle products?
8   MS. AGRAWAL: Objection. Form,
9   outside the scope.
10 A. I don't know that, no.
11 Q. You don't know if any Oracle Java products
12   have this static array initialization --
13   MS. AGRAWAL: Same objection.
14 Q. -- procedure?
15   MS. AGRAWAL: Same objections.
16 A. I don't. I haven't been asked, you know --
17   I was never asked to answer that question.
18 Q. Page 13, paragraph 62, you state "To study
19   the effect on dex file size for different
20   primitive data types, I created a number of
21   simple Java programs, all of which are
22   similar to the following," and then you
23   provide some code; is that correct?
24 A. Yes.
25 Q. Is this what a typical Android application

Page 76

1   looks like?
2   MS. AGRAWAL: Objection. Form.
3 A. This is code that is specifically structured
4   to enable -- to enable the measurement of
5   the effect on the size of the dex file of
6   different data types, array sizes, and
7   whether or not the array initialization is
8   being optimized.
9 Q. How often are static arrays used in an
10   Android application?
11   MS. AGRAWAL: Objection. Form.
12 A. So I have not -- I have not performed a
13   survey of an Android applications in
14   general, but, you know, in my experience,
15   initialized arrays are, you know, relatively
16   common in applications, or in Java source
17   code in general. I wouldn't say that they
18   are a huge, you know, component of the
19   source code -- of most source code, but they
20   are used quite frequently.
21 Q. So if you had an application, what
22   percentage of that application would you
23   expect to have static arrays? Would that be
24   one percent of the application? Ten percent
25   of the application?

Page 77

20 (Pages 74 - 77)

```
 1        C E R T I F I C A T E
 2
 3  COMMONWEALTH OF MASSACHUSETTS
 4  MIDDLESEX, SS.
 5
        I, Jill Shepherd, Notary Public, in
 6  and for the Commonwealth of Massachusetts,
 7  do hereby certify that:
        NOEL POORE, the witness whose
 8  deposition taken on September 7, 2011 is
    hereinbefore set forth, was satisfactorily
 9  identified by means of driver's license, and
10  was duly sworn by me, and that the foregoing
    transcript is a true and accurate record of
11  the testimony given by such witness and such
12  testimony is a true and accurate
13  transcription of my stenotype notes to the
14  best of my knowledge, skill, and ability.
        I further certify that I am not
15  related to any of the parties in this matter
16  by blood or marriage and that I am in no way
17  interested in the outcome of this matter.
18      IN WITNESS WHEREOF, I have hereunto
19  set my hand and notarial seal this 8th day
20  of September, 2011.
21
22
        _____
23        Jill Shepherd, RPR
24        Notary Public
25  My Commission expires:  April 18, 2014
```
Page 94

```
 1            I N D E X
 2
 3  WEDNESDAY, SEPTEMBER 7, 2011
 4
 5  WITNESS                    PAGE
 6
 7  NOEL POORE
 8  Examination By Mr. Francis        5
 9
10
11        DEPOSITION EXHIBITS
12  NUMBER        DESCRIPTION        PAGE
13
14  Exhibit 472   Defendant's Notice of Rule    4
15          30(B)(1) Deposition of
16          Noel Poore
17  Exhibit 473   Summary and Report of      9
18          Noel Poore
19  Exhibit 474   Resume              9
20  Exhibit 475   U.S. Patent 5,966,702    33
21  Exhibit 476   U.S. Patent 6,061,520    74
22
23
24
25
```
Page 95

25 (Pages 94 - 95)